FUJITSU

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL

Refrigerant R410A

Indoor unit	Outdoor unit
ASU9RL2	AOU9RL2
ASU12RL2	AOU12RL2

CONTENTS

FUJITSU GENERAL LIMITED

SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter	
INDOOR UNIT		ASU9RL2	ASU12RL2
OUTDOOR UNIT		AOU9RL2	AOU12RL2
POWER SOURCE		115 V	
FREQUENCY		60 Hz	
COOLING CAPACITY		9,000 Btu/h	12,000 Btu/h
HEATING CAPACITY		10,000 Btu/h	14,000 Btu/h
INPUT WATTS	Cooling	0.830 kW	1.200 kW
	Heating	0.770 kW	1.210 kW
E.E.R.	Cooling	10.85 Btu/Wh	10.00 Btu/Wh
COP	Heating	13.0 Btu/Wh	11.55 Btu/Wh
RUNNING CURRENT	Cooling	7.5 A	10.9 A
	Heating	7.0 A	11.0 A
MAXIMUM CURRENT	Cooling	13.0 A	13.0 A
	Heating	13.5 A	15.0 A
MOISTURE REMOVAL		2.7 Pts/h 1.3 L/h	3.8 Pts/h 1.8 L/h
AIR CIRCULATION HIGH	Cooling	424 CFM, 720 m3/h	
	Heating	435 CFM, 740 m3/h	

FAN MOTOR

POWER SOURCE		115 V	
INDOOR UNIT Cooling	High	1,320 r.p.m.	1,320 r.p.m.
	Medium	1,120 r.p.m.	1,120 r.p.m.
	Low	840 r.p.m.	860 r.p.m.
	Quiet	700 r.p.m.	700 r.p.m.
INDOOR UNIT Heating	High	1,360 r.p.m.	1,360 r.p.m.
	Medium	1,120 r.p.m.	1,120 r.p.m.
	Low	900 r.p.m.	900 r.p.m.
	Quiet	700 r.p.m.	700 r.p.m.
OUTDOOR UNIT Cooling		730 r.p.m.	860 r.p.m.
OUTDOOR UNIT Heating		650 r.p.m.	760 r.p.m.

NOISE LEVEL

INDOOR UNIT	High	43 dB	
	Medium	38 dB	
	Low	33 dB	
	Quiet	23 dB	
OUTDOOR UNIT Cooling		47 dB	51 dB
OUTDOOR UNIT Heating		48 dB	51 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary	
DISCRIMINATION		ASM89D10UFZ	
WEIGHT (with oil)		19 lb. 10 oz., 8.9 kg	
PRECHARGED REFRIGERANT		23 oz., 650 g	28 oz., 800 g
REFRIGERANT TYPE		R410A	R410A
FULL CHARGE (Pipe length)	49 ft., 15 m	23 oz., 650 g	28 oz., 800 g
	66 ft., 20 m	26 oz., 750 g	32 oz., 900 g
ADDITIONAL CHARGE		0.22 oz./ft., 20 g/m	
MAXIMUM PIPING HEIGHT		49 ft., 15 m	

DIMENSIONS

INDOOR UNIT H x W x D	10-5/16 x 32-9/32 x 8-1/8 in. 262 x 820 x 206 mm
OUTDOOR UNIT H x W x D	21-1/4 x 26 x 11-11/32 in. 540 x 660 x 290 mm

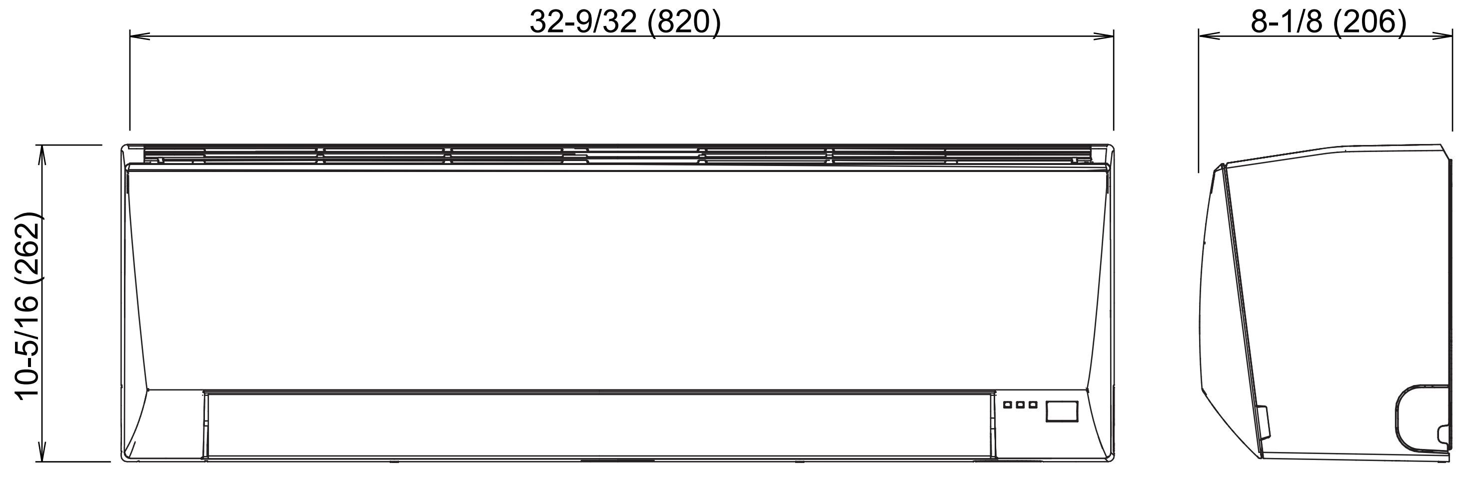
WEIGHT

INDOOR UNIT Net / Shipping	15 lb. / 20 lb. 7 kg / 9 kg	
OUTDOOR UNIT Net / Shipping	64 lb. / 68 lb. 29 kg / 31 kg	68 lb. / 73 lb. 31 kg / 33 kg

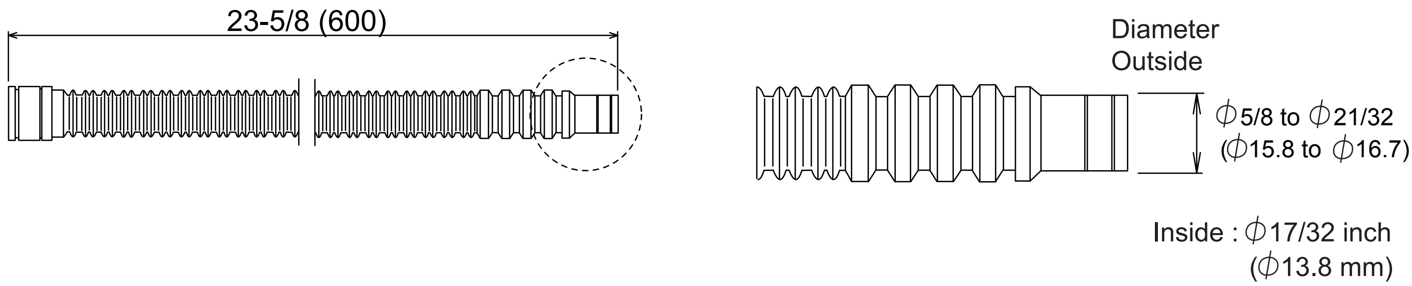
DIMENSIONS

unit : inch (mm)

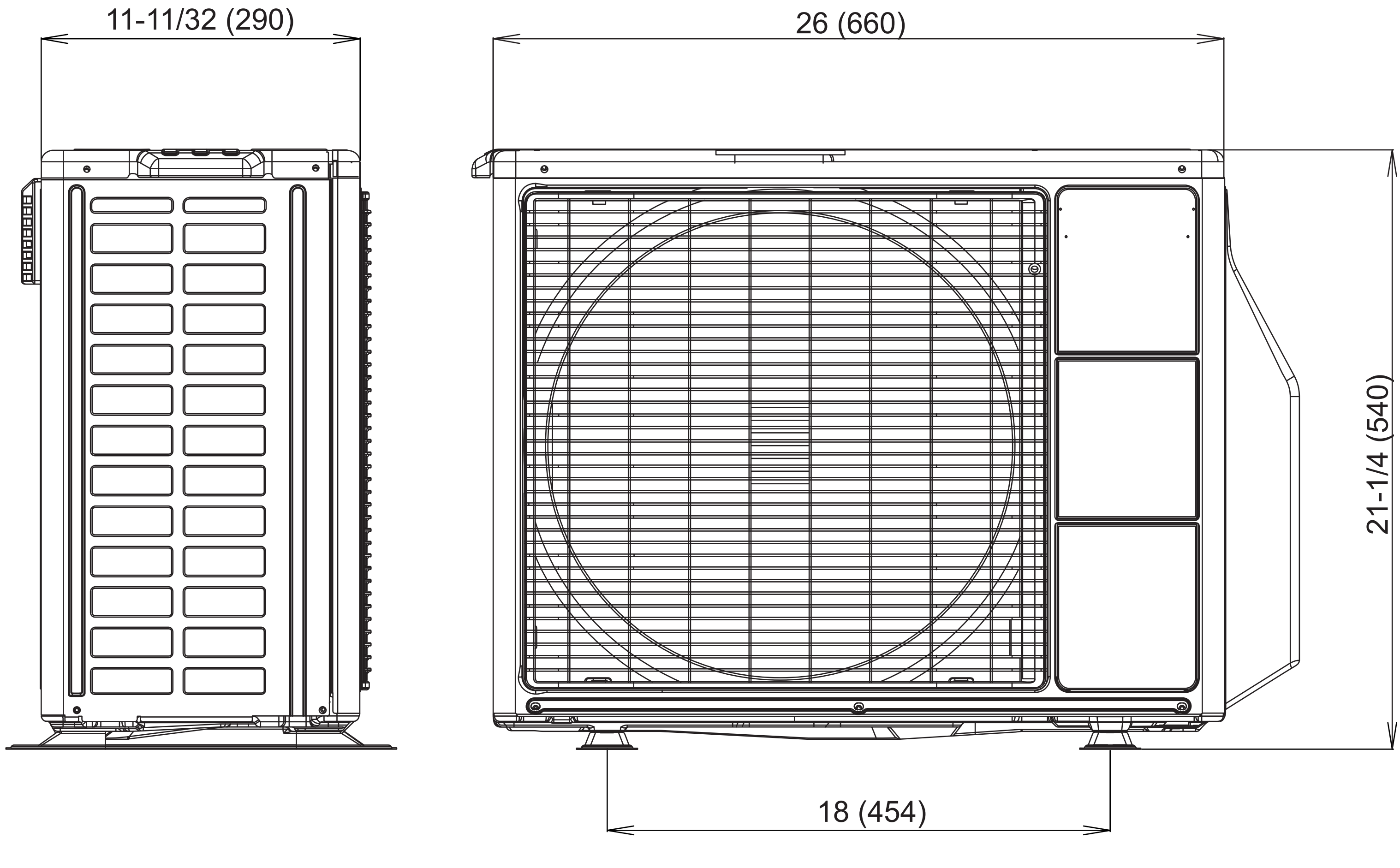
INDOOR UNIT



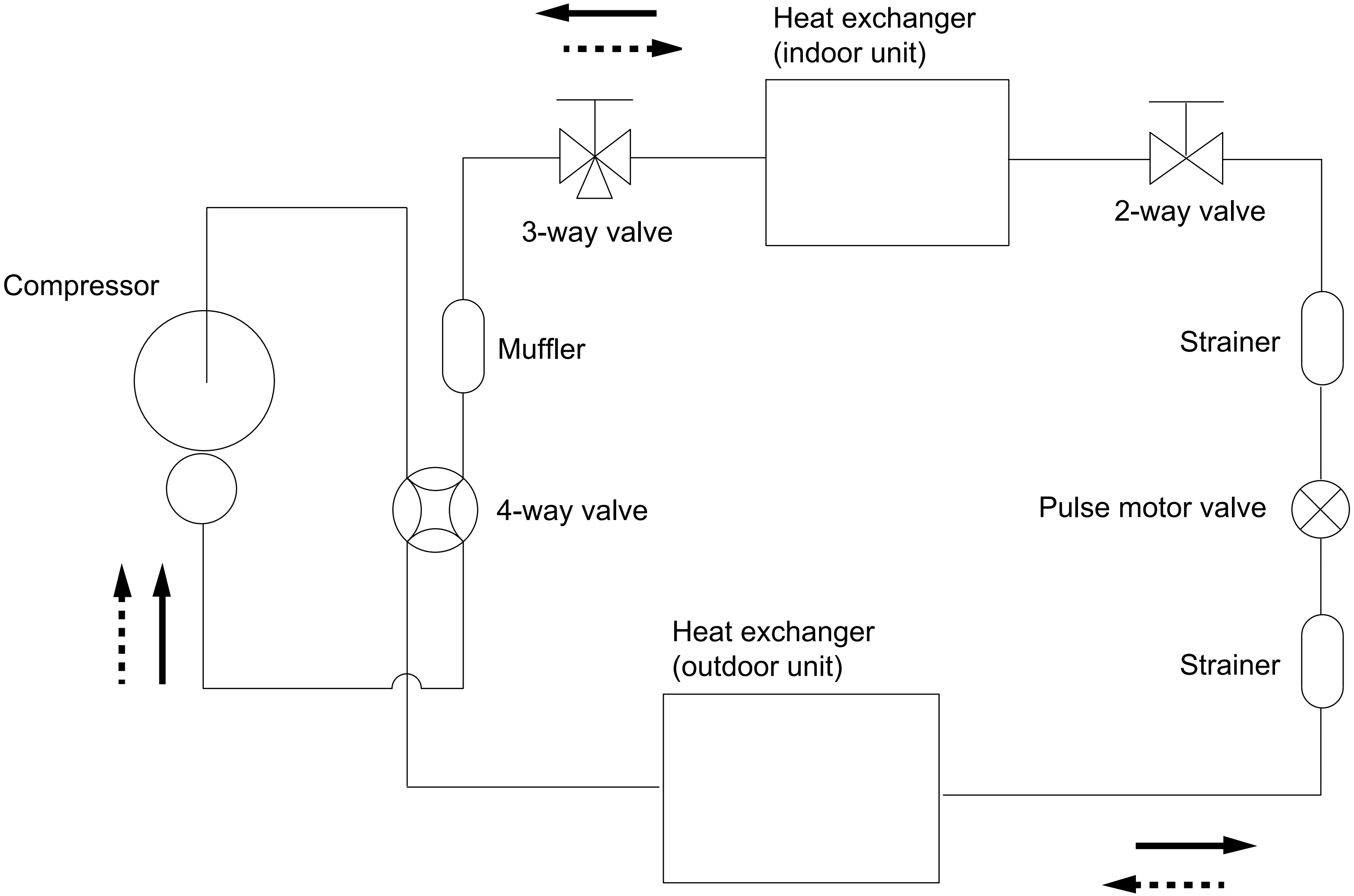
Drain hose



OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM



Refrigerant flow

Cooling

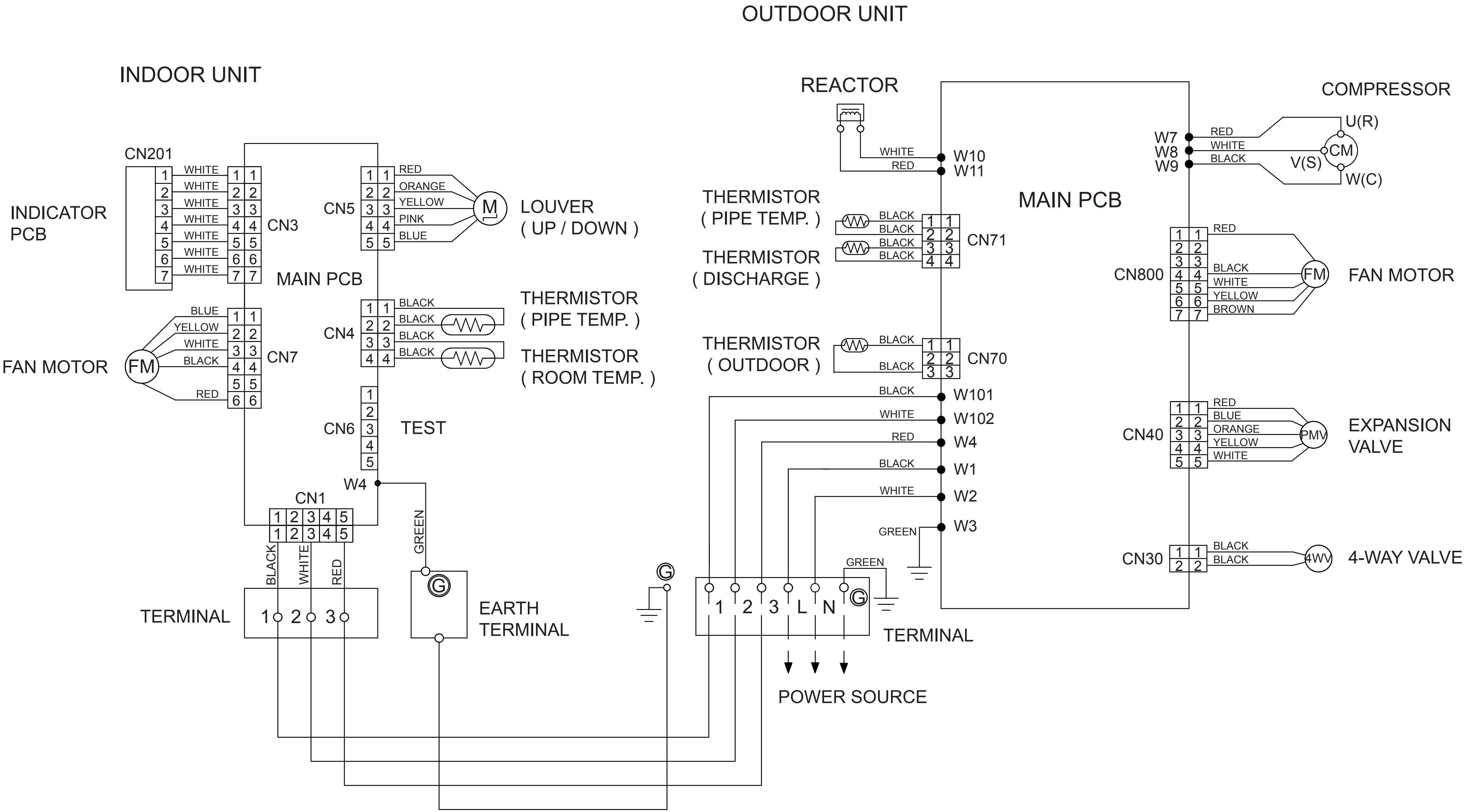
Heating

Refrigerant pipe diameter

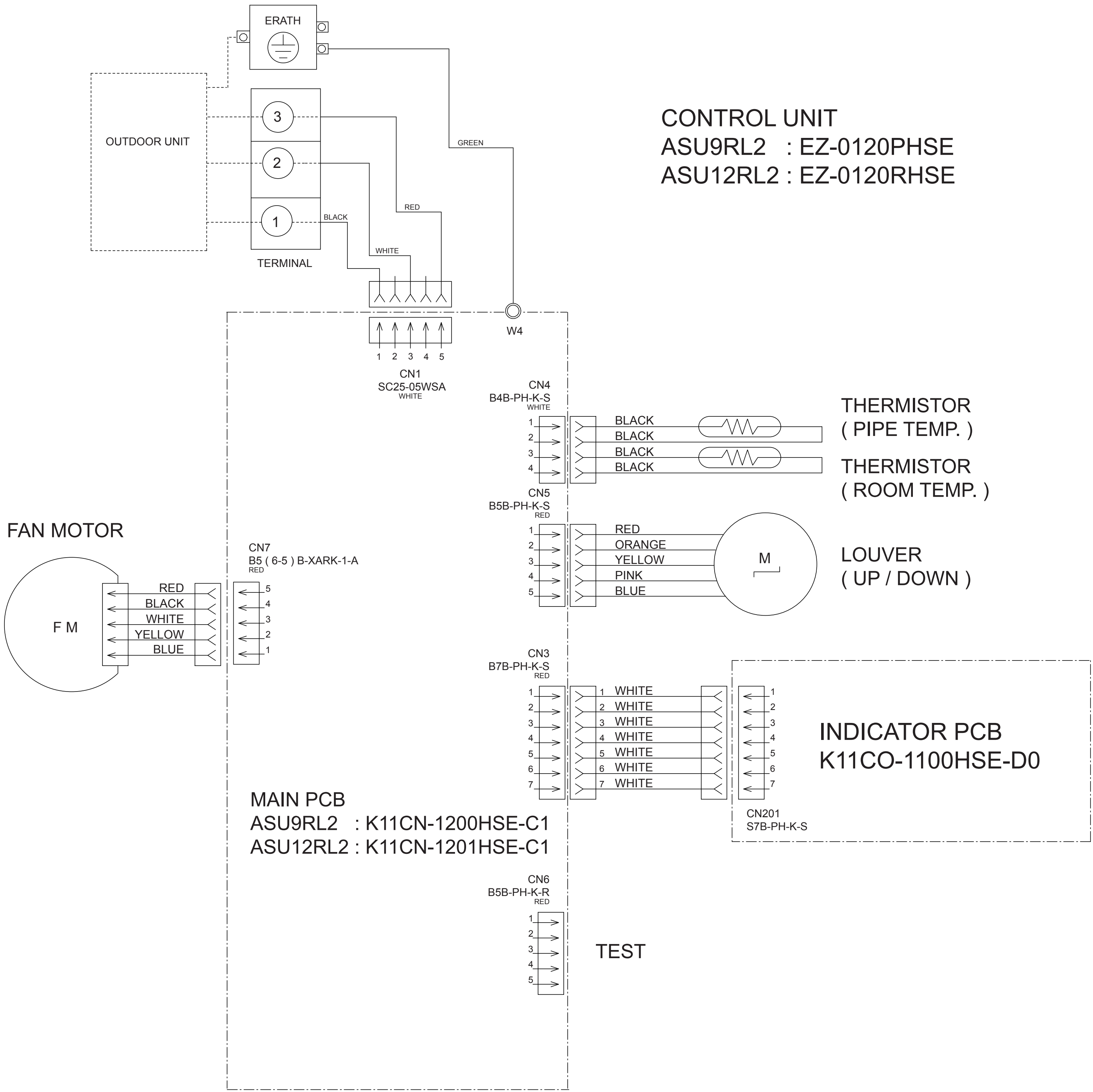
Liquid : 1/4" (6.35 mm)

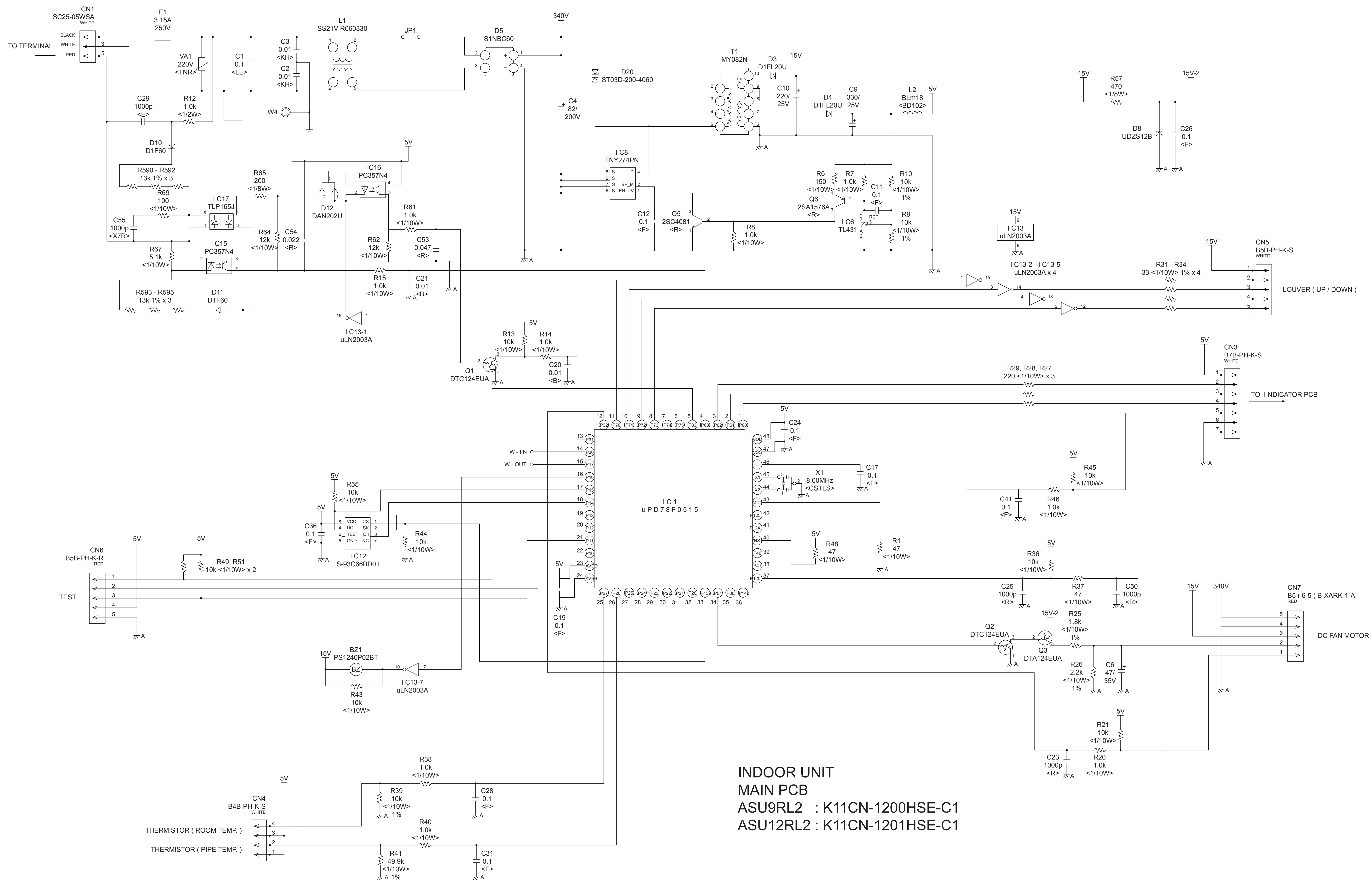
Gas : 3/8" (9.52 mm)

CIRCUIT DIAGRAM



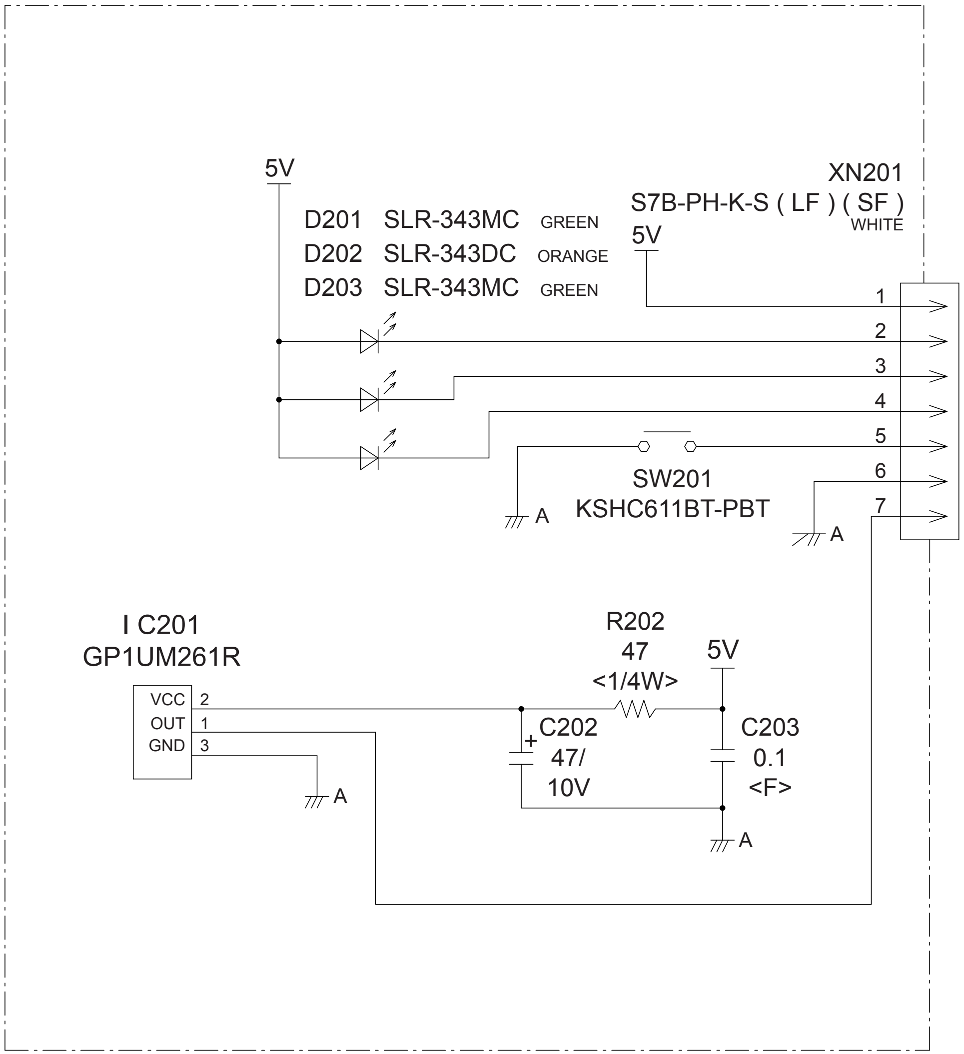
INDOOR PCB
CIRCUIT DIAGRAM



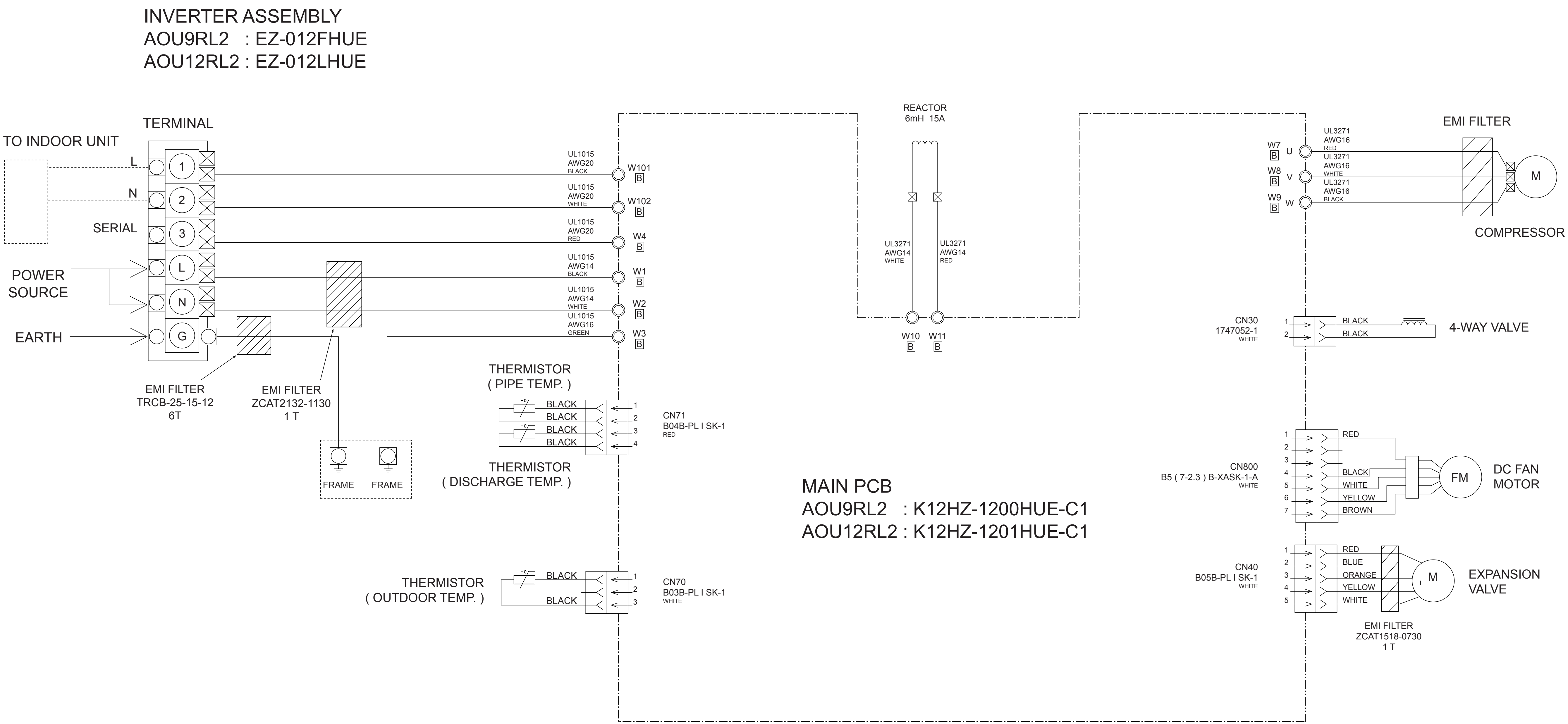


INDOOR UNIT
MAIN PCB
ASU9RL2 : K11CN-1200HSE-C1
ASU12RL2 : K11CN-1201HSE-C1

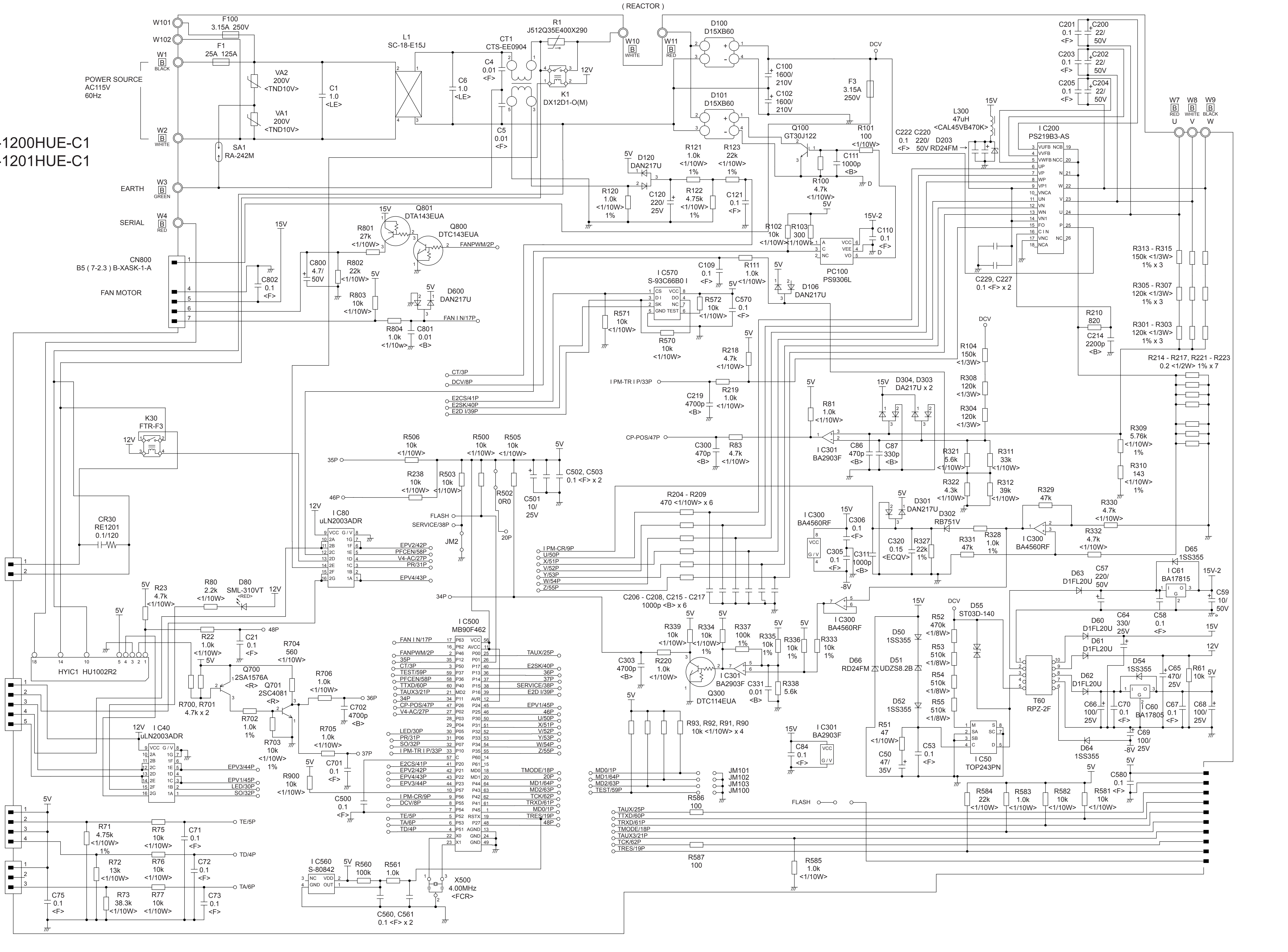
INDOOR UNIT
INDICATOR PCB
K11CO-1100HSE-D0



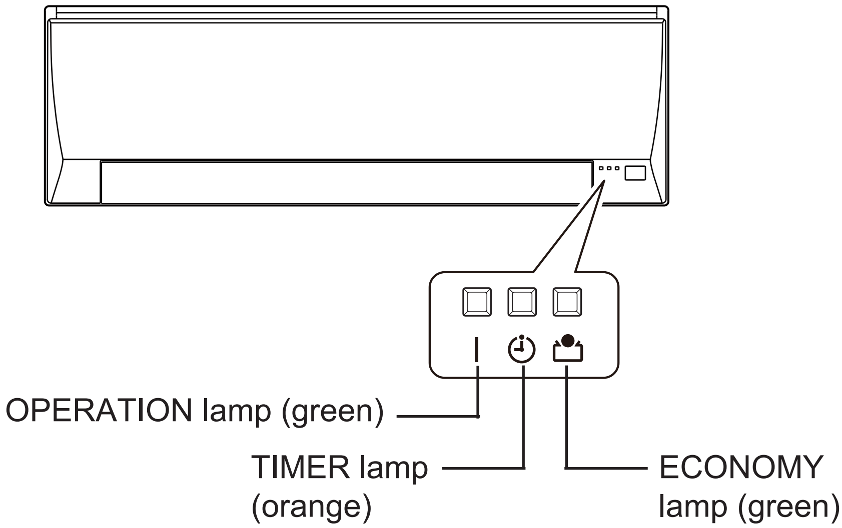
OUTDOOR PCB
CIRCUIT DIAGRAM



OUTDOOR UNIT
MAIN PCB
AOU9RL2 : K12HZ-1200HUE-C1
AOU12RL2 : K12HZ-1201HUE-C1



ERROR DETECTION



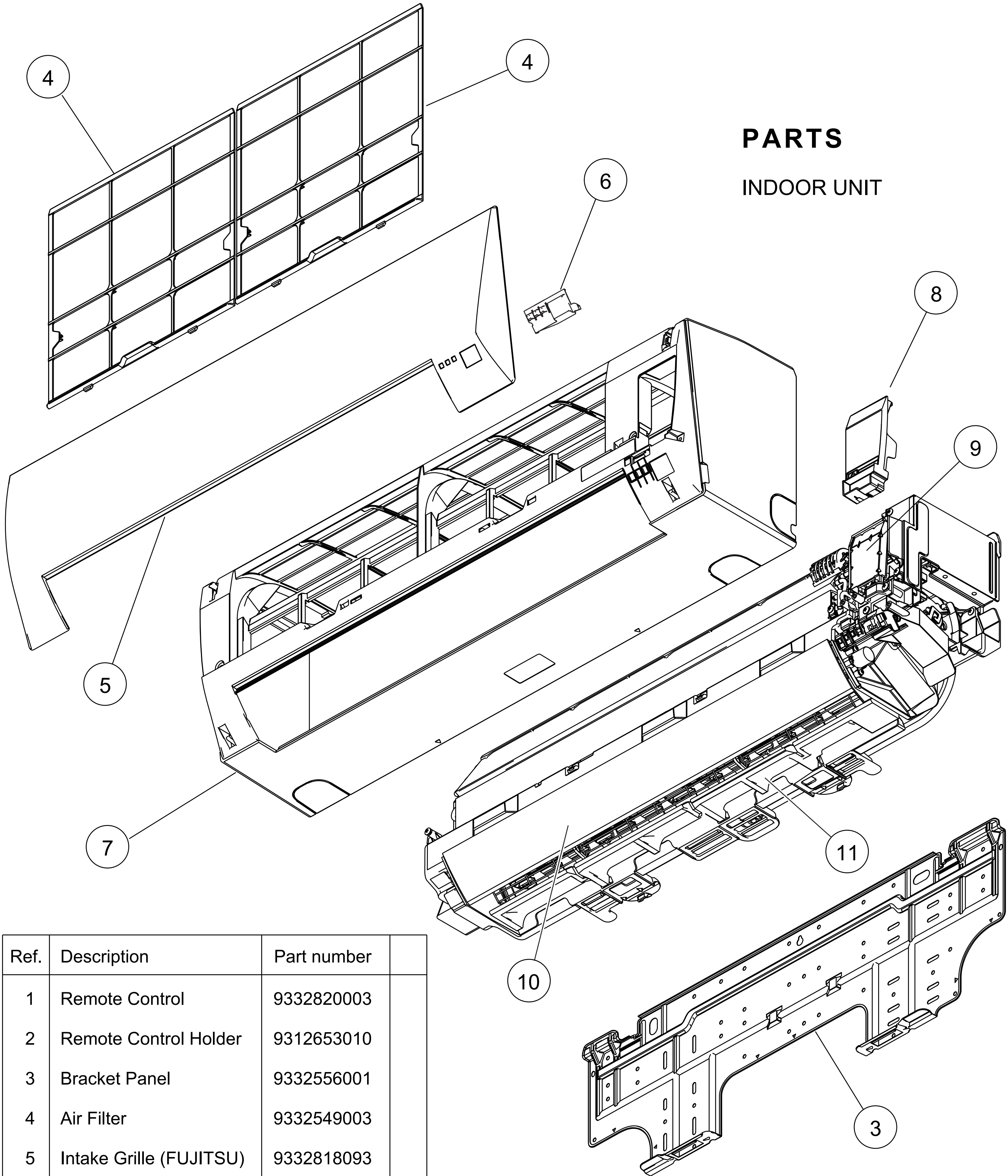
TROUBLESHOOTING
with the indoor unit display

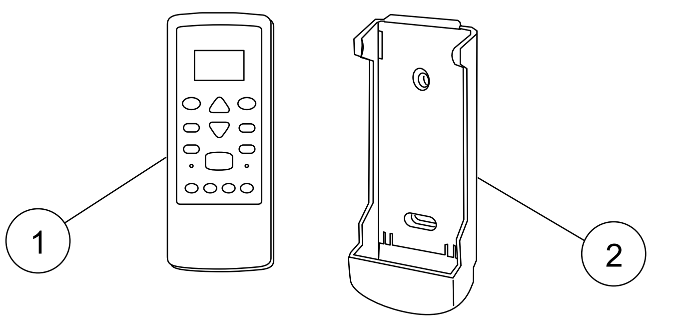
Error	OPERATION	TIMER	ECONOMY
Serial communication error	1 flash	1 flash	Rapid flash (0.1s on / 0.1s off)
Indoor unit PCB model information error	3	2	
Manual auto switch error	3	5	
Room temp. sensor error	4	1	
Indoor unit Heat Ex. Middle temp.sensor error	4	2	
Indoor unit fan motor error	5	1	
Indoor unit error	5	15	
Outdoor unit main PCB model information error or communication error	6	2	
Inverter error	6	3	
Active filter error, PFC circuit error	6	4	
Trip terminal L error	6	5	
Display PCB microcomputers communication error	6	10	
Discharge temp. sensor error	7	1	
Outdoor unit Heat Ex. liquid temp. sensor error	7	3	
Outdoor temp. sensor error	7	4	
Current sensor error	8	4	
Trip detection	9	4	
Compressor rotor position detection error	9	5	
Outdoor unit fan motor error	9	7	
4-way valve error	9	9	
Discharge temp. error	10	1	

(0.5s on / 0.5s off)

PARTS

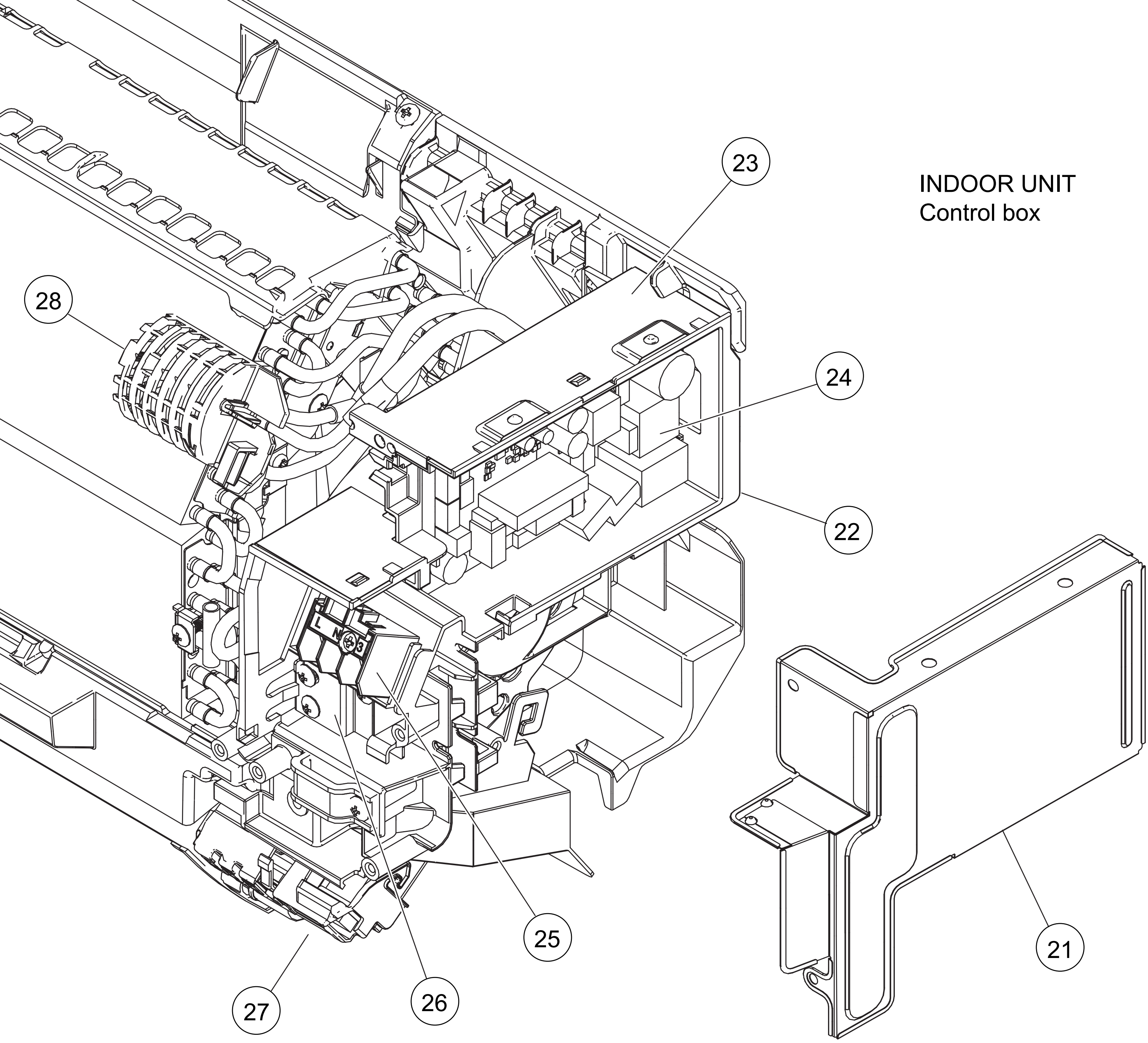
INDOOR UNIT

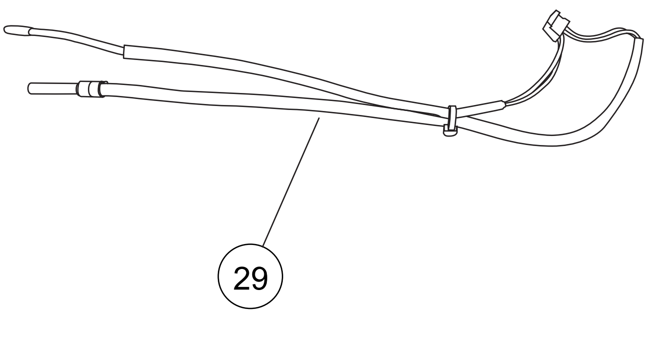




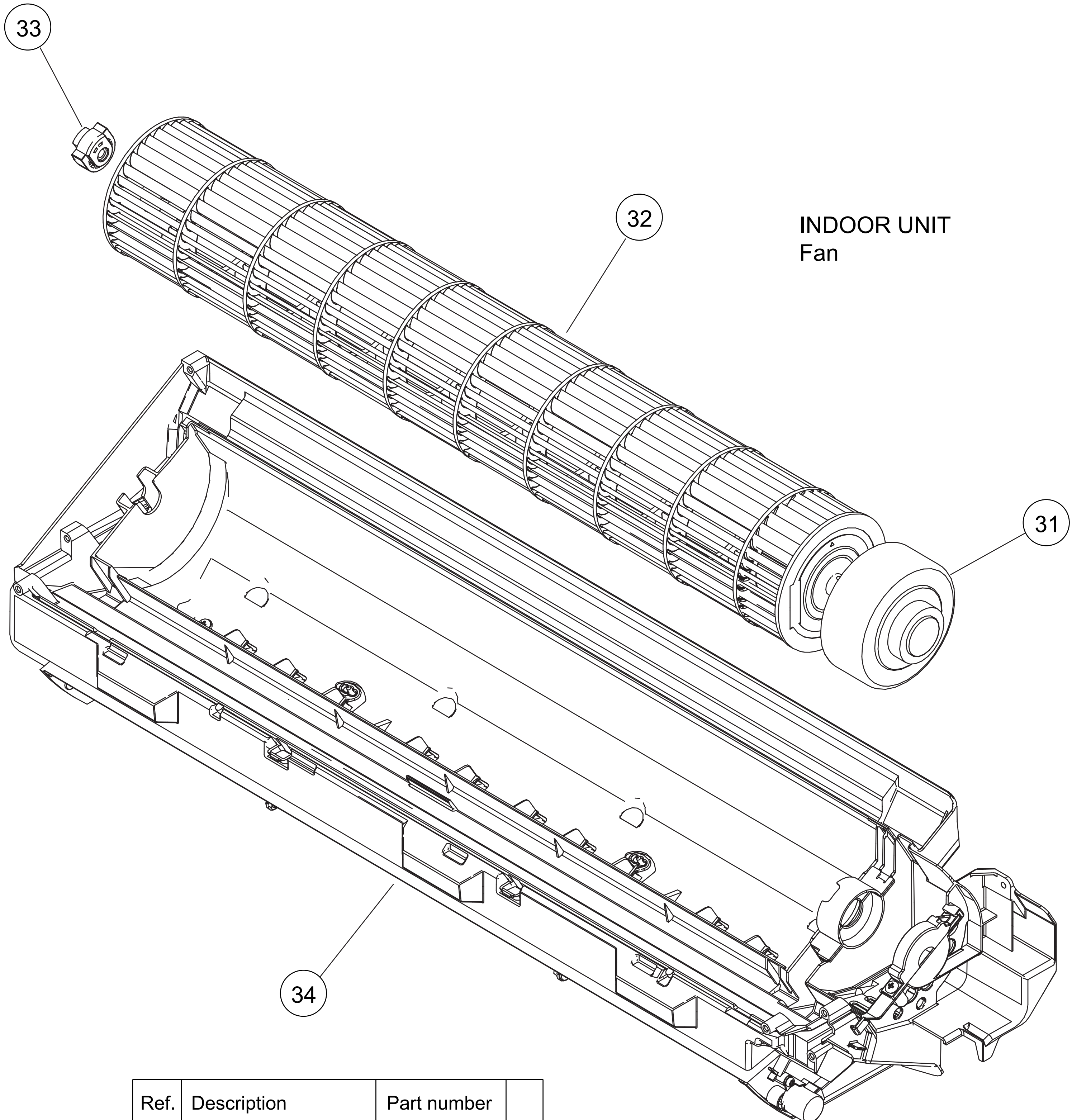
Ref.	Description	Part number	
1	Remote Control	9332820003	
2	Remote Control Holder	9312653010	
3	Bracket Panel	9332556001	
4	Air Filter	9332549003	
5	Intake Grille (FUJITSU)	9332818093	
6	Receiver Window	9332546019	
7	Front Panel	9332545012	
8	Wire Cover	9332544008	
9	Wire Shield	9332555004	
10	Louver	9332548006	
11	Panel Cover	9332559002	

INDOOR UNIT
Control box





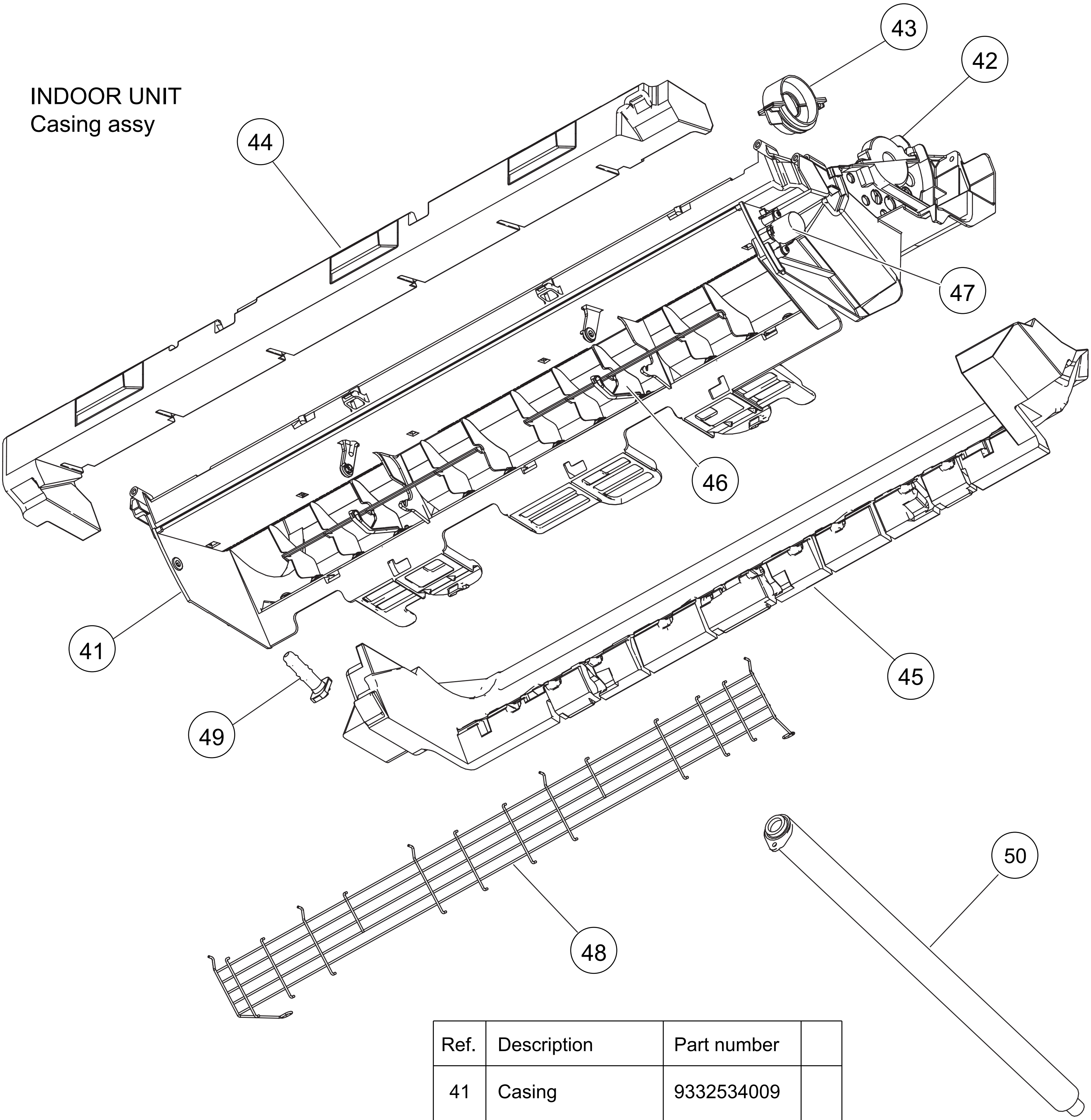
Ref.	Description	Part number	
21	Cover Shield	9332554007	
22	Control Box	9332542011	
23	Box Shield Assy	9332561005	
24	Main PCB (09)	9709170076	
24	Main PCB (12)	9709170083	
25	Terminal	9900720001	
26	Earth Terminal	9332553024	
27	Display Assy	9709173015	
28	Room Thermistor Holder	9316895003	
29	Thermistor Assy	9900714017	



INDOOR UNIT
Fan

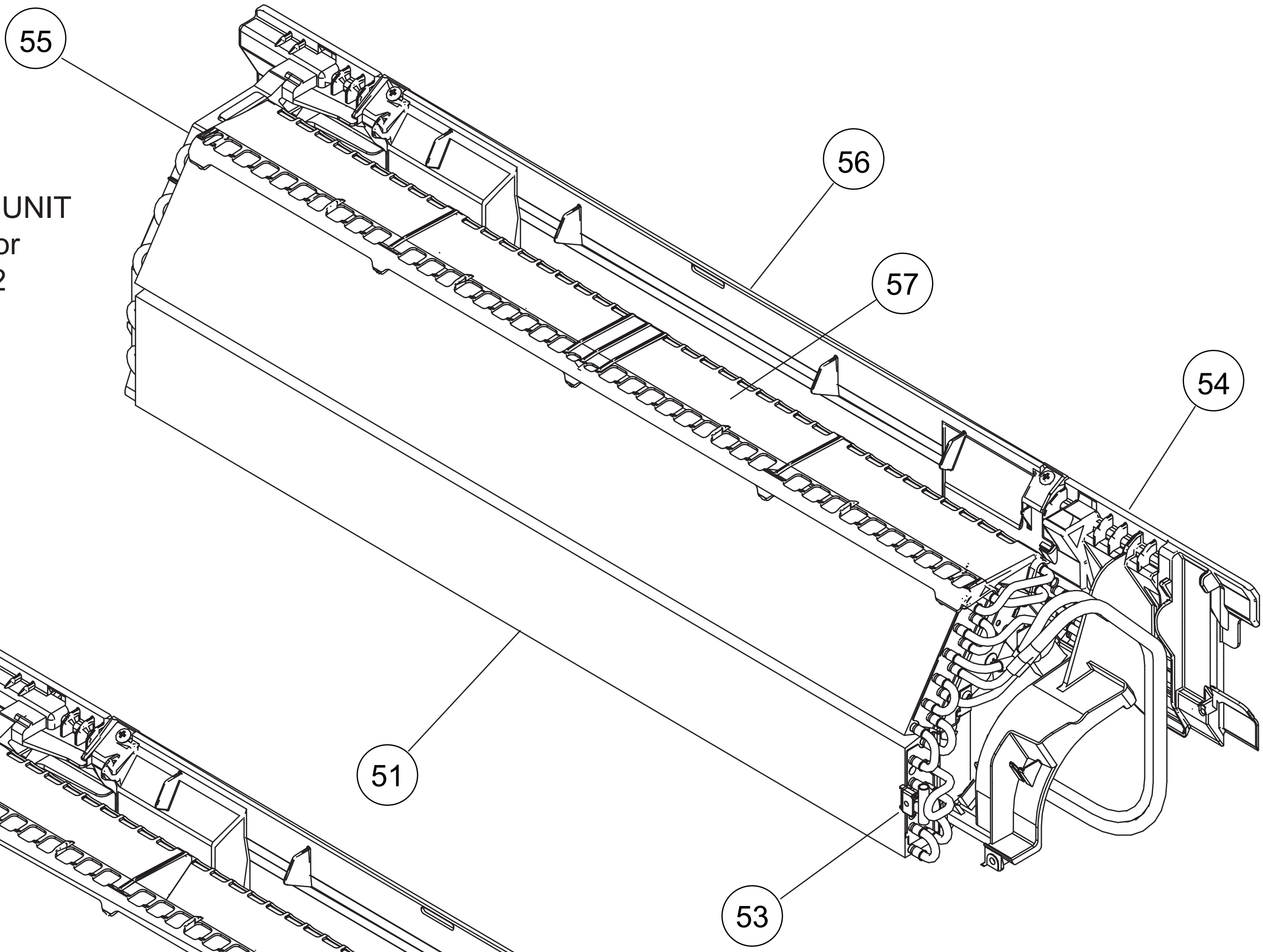
Ref.	Description	Part number	
31	Fan Motor	9603249007	
32	Crossflow Fan Assy	9316830004	
33	Bearing C Assy	9306628017	
34	Casing Assy	9332613018	

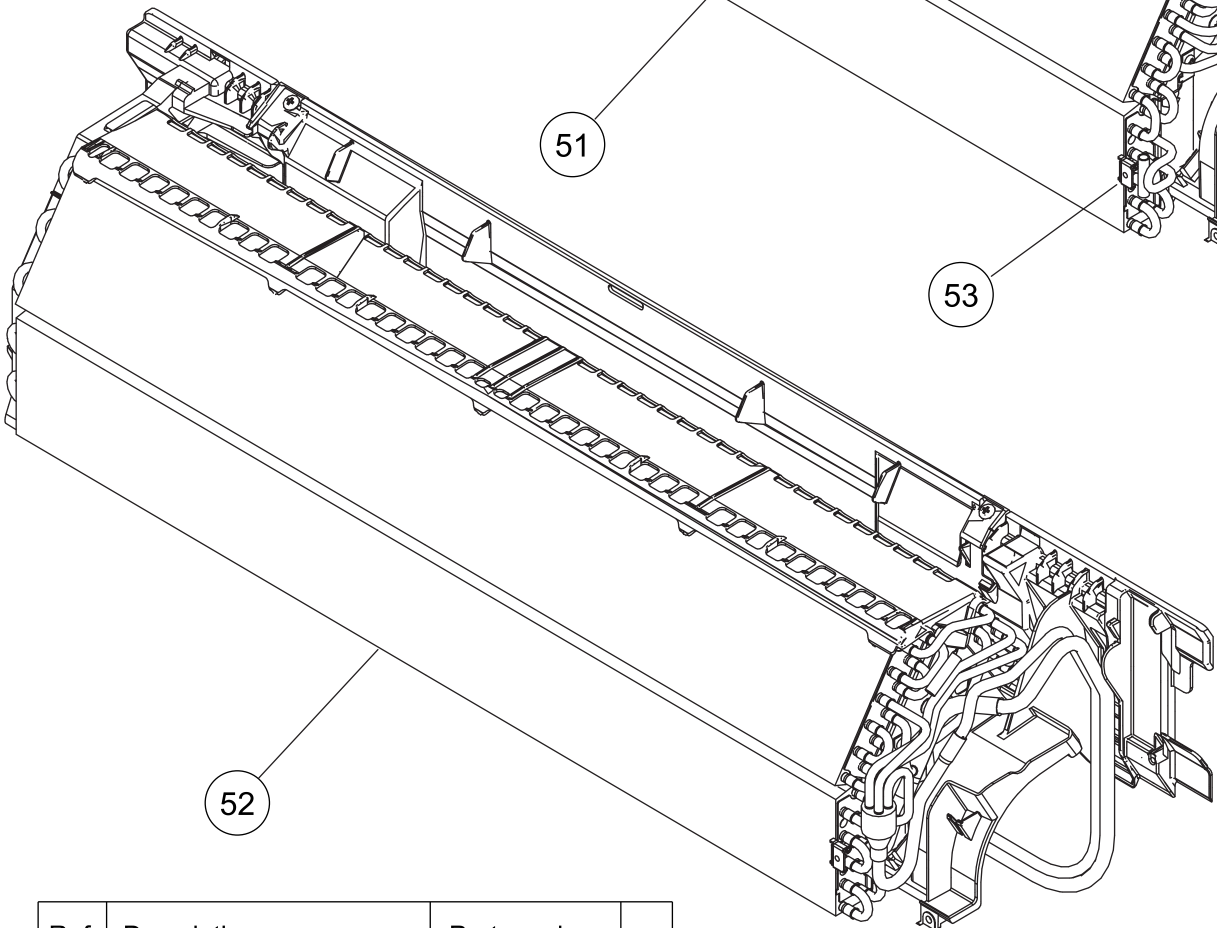
INDOOR UNIT
Casing assy



Ref.	Description	Part number	
41	Casing	9332534009	
42	Motor Cover	9316601000	
43	Motor Cover	9316568006	
44	Casing Cover F	9332558005	
45	Casing Cover B	9332557008	
46	R and L Louver	9332535006	
47	Step Motor	9900725006	
48	Fan Guard	9332551006	
49	Drain Cap	9316177017	
50	Drain Hose Assy	9316904002	

INDOOR UNIT
Evaporator
ASU9RL2



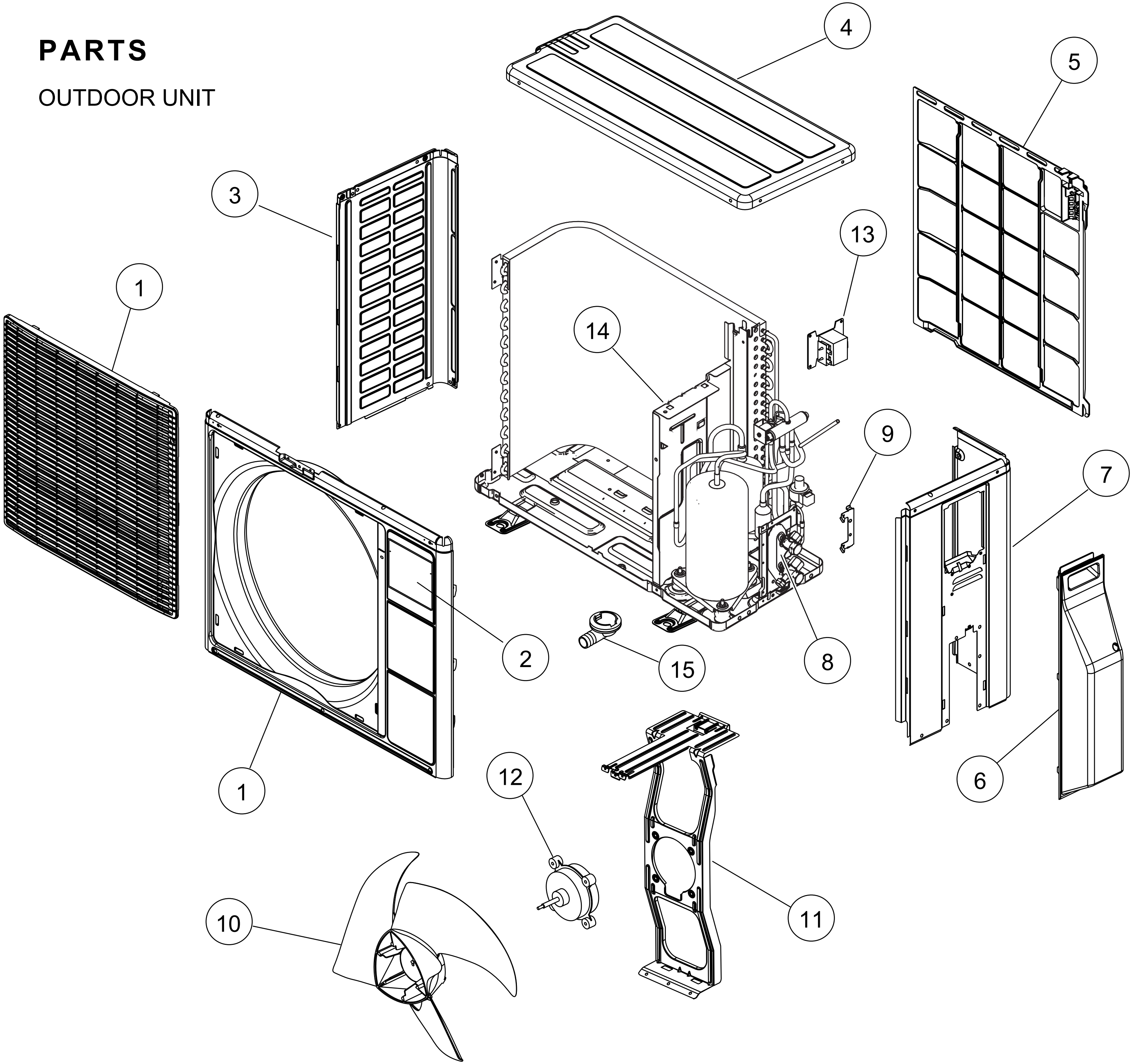


ASU12RL2

Ref.	Description	Part number	
51	Evaporator Total Assy (09)	9316893085	
52	Evaporator Total Assy (12)	9316893092	
53	Earth Terminal	9316579002	
54	Evaporator Holder R	9332538007	
55	Evaporator Holder L	9332539004	
56	Rear Bracket	9332540017	
57	Filter Guide	9332541007	

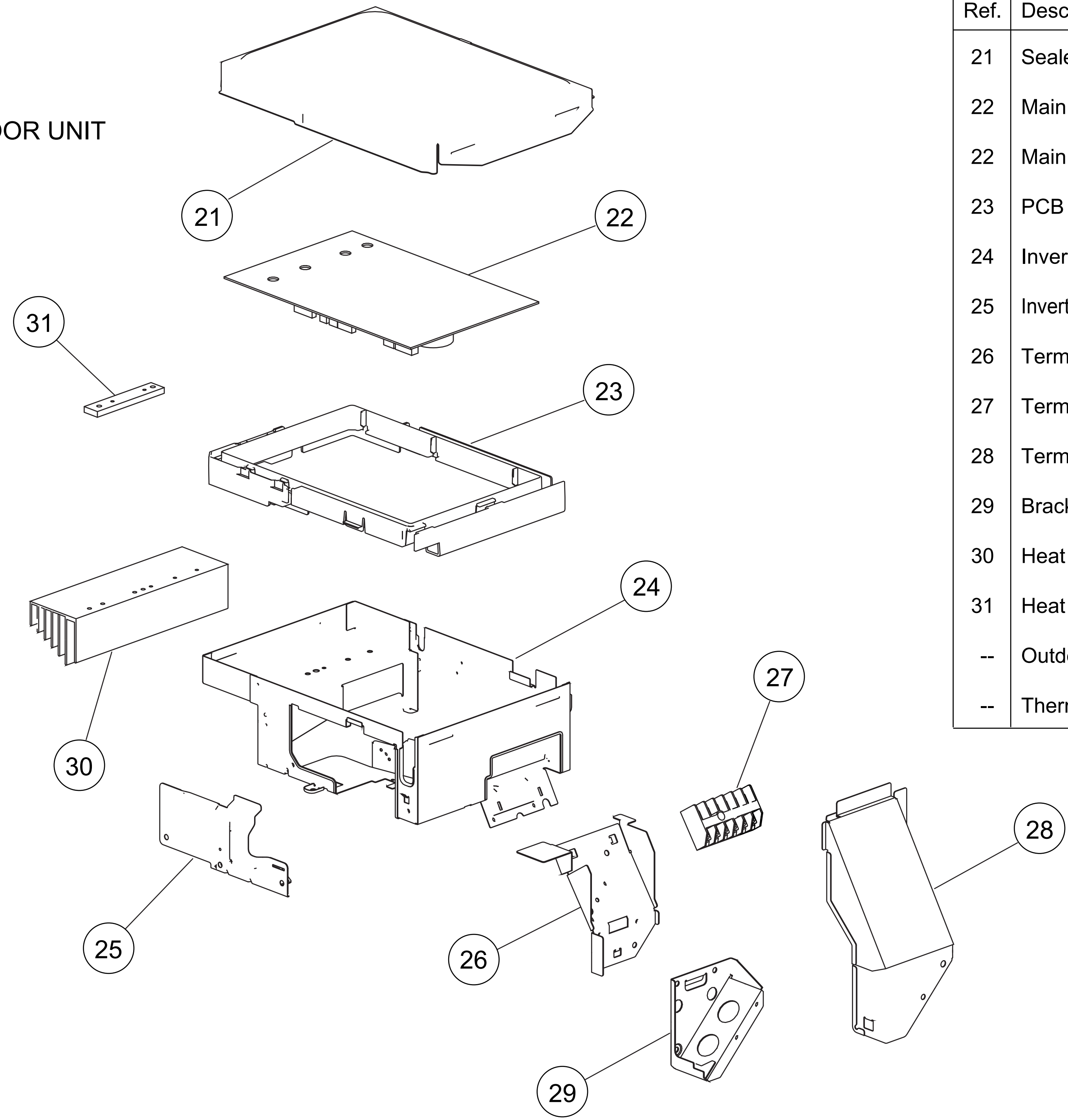
PARTS

OUTDOOR UNIT

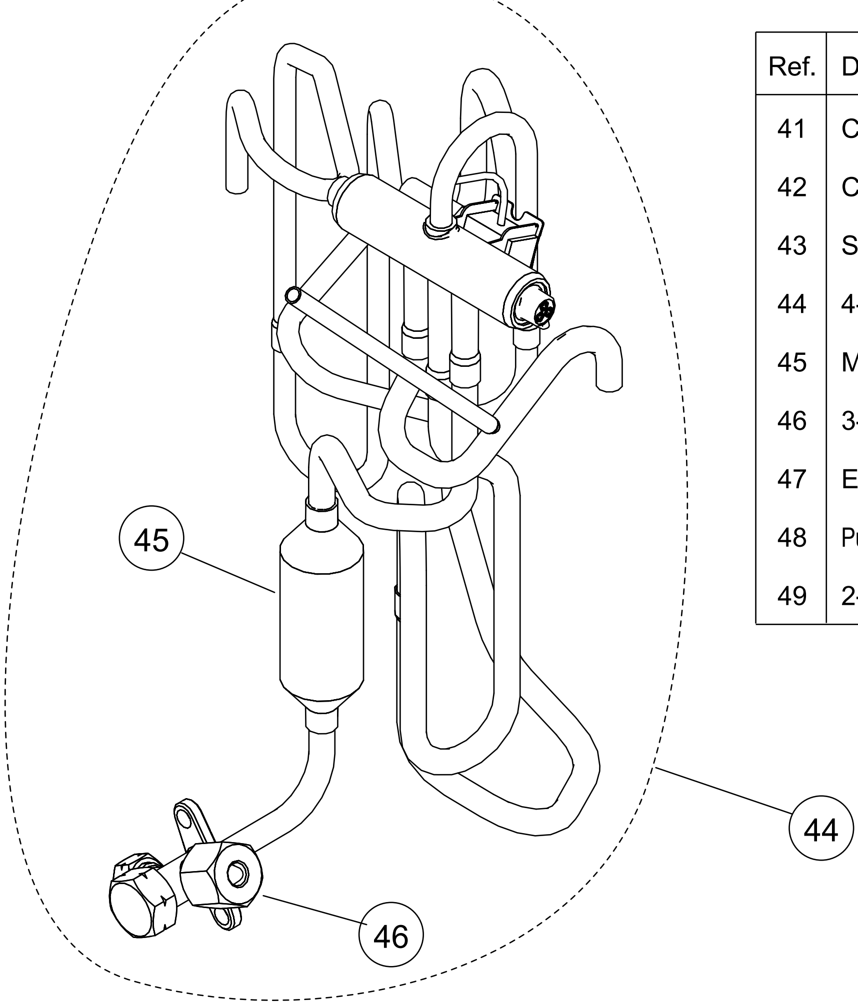


Ref.	Description	Part number	
1	Front Panel Assy	9317789035	
2	Emblem	9317903011	
3	Cabinet Left Assy	9317813006	
4	Top Panel Assy	9317939034	
5	Protective Net	9331262019	
6	Switch Cover	9313940027	
7	Cabinet Right Assy	9331336079	
8	Valve Bracket	9316523012	
9	Valve Bracket Cover	9331683005	
10	Propeller Fan	9309909014	
11	Motor Bracket (9)	9332289022	
11	Motor Bracket (12)	9332289039	
12	Fan Motor	9603074005	
13	Reactor Assy	9900419011	
14	Separator Assy	9317927017	
15	Drain Pipe Assy	9303029022	

OUTDOOR UNIT

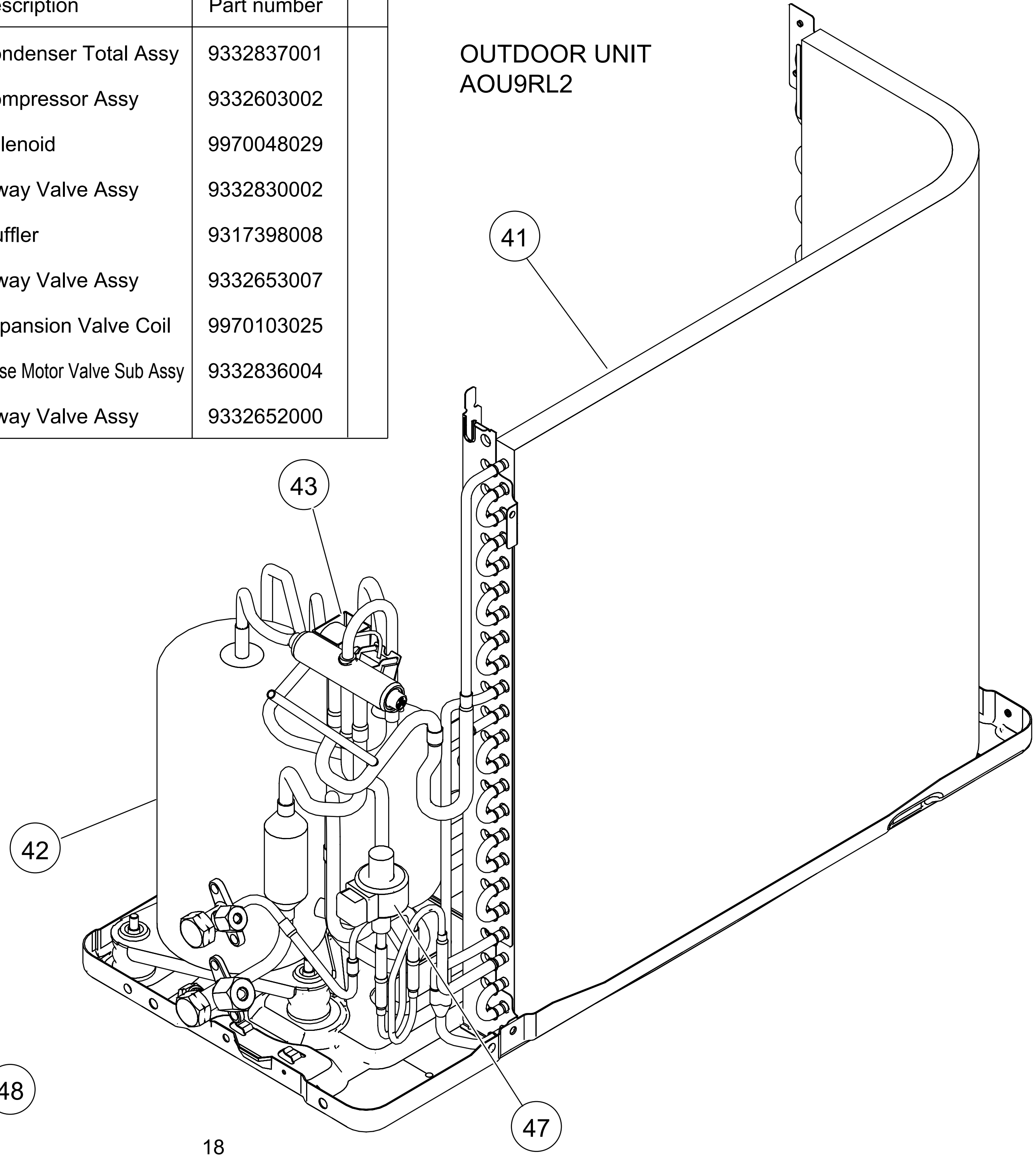


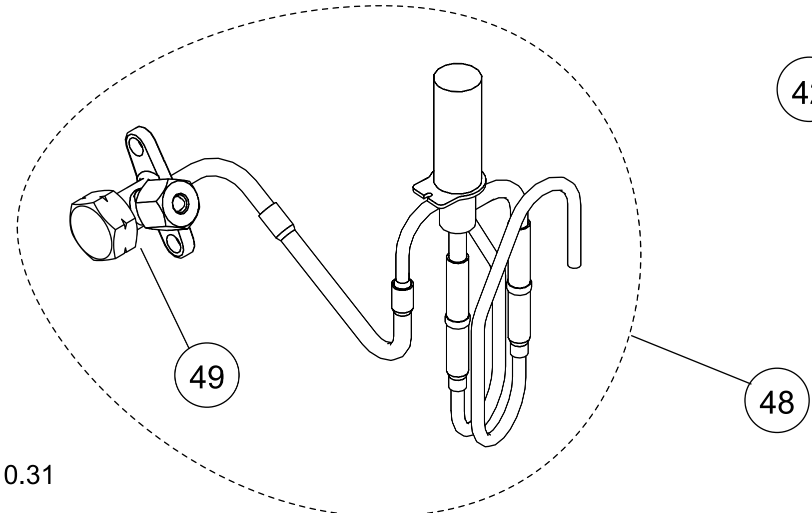
Ref.	Description	Part number	
21	Sealed Panel	9331256025	
22	Main PCB (09)	9709369005	
22	Main PCB (12)	9709369012	
23	PCB Holder	9331261012	
24	Inverter Case Assy	9331279086	
25	Inverter Case Cover	9331258012	
26	Terminal Bracket	9317689021	
27	Terminal 6P	9900016098	
28	Terminal Cover Assy	9317898041	
29	Bracket Conduit	9313938017	
30	Heat Sink A	9331263030	
31	Heat Sink B	9314090028	
--	Outdoor Thermistor	9900565008	
--	Thermistor Assy	9900628000	



Ref.	Description	Part number	
41	Condenser Total Assy	9332837001	
42	Compressor Assy	9332603002	
43	Solenoid	9970048029	
44	4-way Valve Assy	9332830002	
45	Muffler	9317398008	
46	3-way Valve Assy	9332653007	
47	Expansion Valve Coil	9970103025	
48	Pulse Motor Valve Sub Assy	9332836004	
49	2-way Valve Assy	9332652000	

OUTDOOR UNIT
AOU9RL2

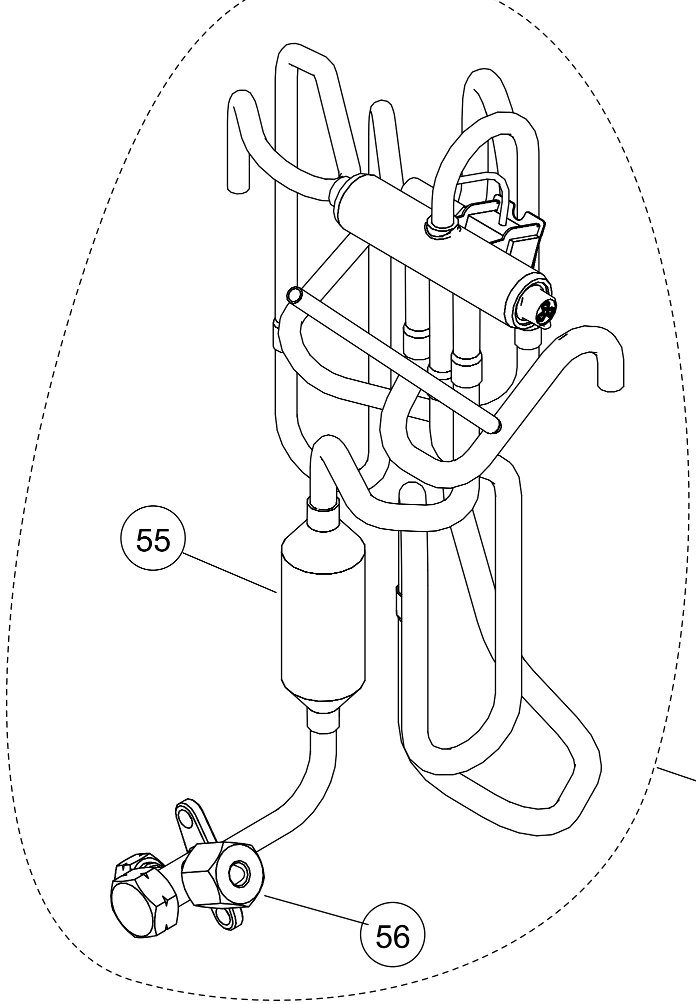


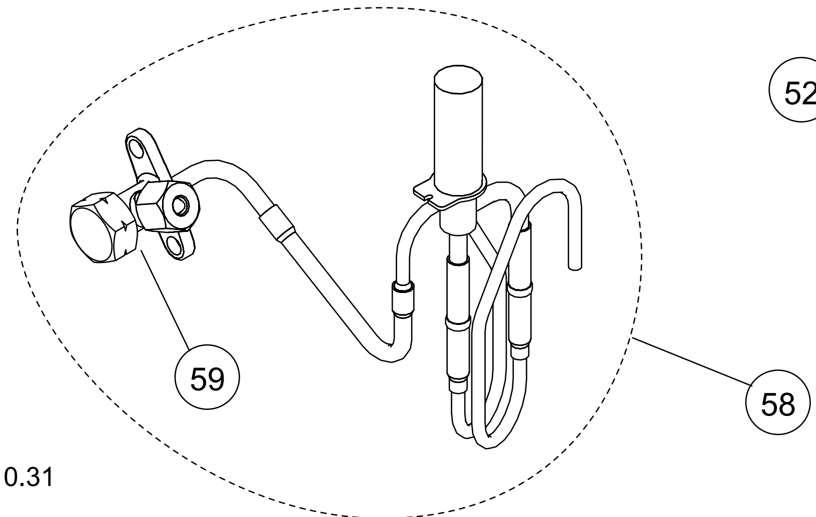


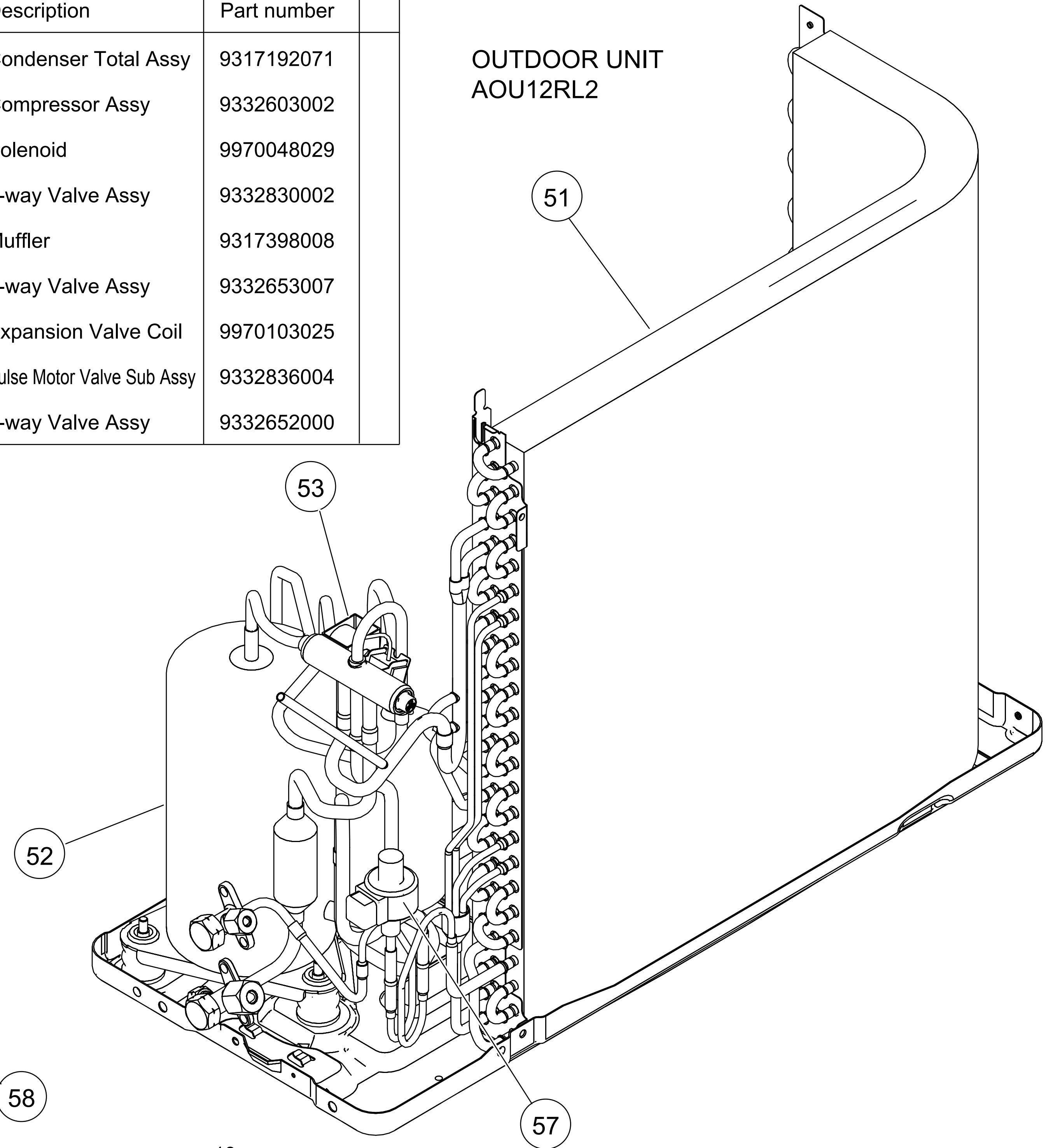
2012.10.31

OUTDOOR UNIT
AOU12RL2

Ref.	Description	Part number	
51	Condenser Total Assy	9317192071	
52	Compressor Assy	9332603002	
53	Solenoid	9970048029	
54	4-way Valve Assy	9332830002	
55	Muffler	9317398008	
56	3-way Valve Assy	9332653007	
57	Expansion Valve Coil	9970103025	
58	Pulse Motor Valve Sub Assy	9332836004	
59	2-way Valve Assy	9332652000	

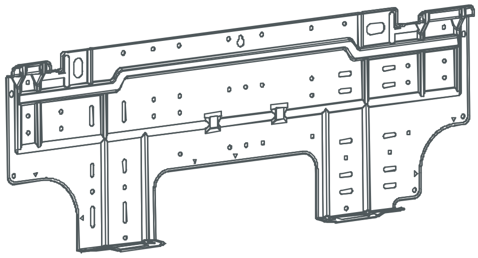
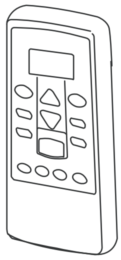
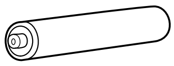
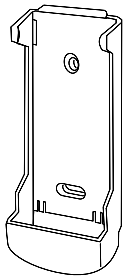
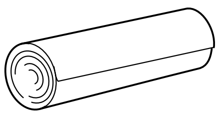
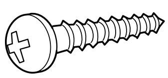
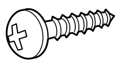




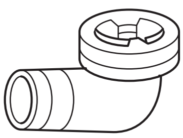


ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
Wall hook bracket 	9332556001
Remote control 	9332820003
Battery (penlight) 	0600185541
Remote control holder 	9312653010
Cloth tape 	9310519004
Tapping screw (big) (ϕ 4 x 25) 	0700076046
Tapping screw (small) (ϕ 3 x 12) 	0700019036

OUTDOOR UNIT

Name and Shape	Part number
Drain pipe assy 	9303029022

1210G4122